in all hearts from the onset of the PC/control period (n = 6 per group) and terminated 2.5 min prior to CO. Coronary flow and LV pressure were monitored throughout each protocol, and area of necrosis (AN) was assessed by tetrazolium staining and expressed as a % of the area at risk of infarction (AR).

		AN/AR
Protocol 1:	Control	63 ± 2%
	PC	30 ± 6%**
Protocol 2:	Control + Neomycin	56 ± 10%
	PC + Neomycin	54 ± 9%

Protocol 1 confirmed the expected reduction in infarct size in PC hearts versus controls (** $p < 0.01$). In contrast, in Protocol 2, infarct size was comparable in both control and PC hearts treated with neomycin. Importantly, protection with PC – and loss of protection with neomycin – was not due to differences in coronary flow or LV pressure among groups (data not shown). These results support the concept that activation of the second messenger inositol (1,4,5)-trisphosphate (and subsequent release of calcium from intracellular stores) during brief antecedent ischemia/reperfusion is an important mediator of infarct size reduction with preconditioning in this isolated rabbit heart model.

777 Myocardial Infarction in the Elderly

Wednesday, March 19, 1997, 8:30 a.m.–10:00 a.m.
Anaheim Convention Center, Room A19

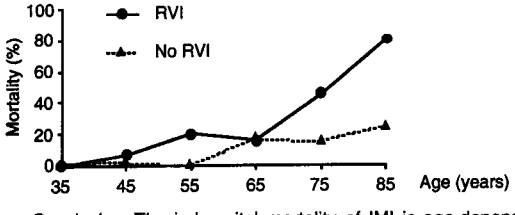
8:30

777-1 In-hospital mortality of acute inferior myocardial infarction: Interaction between age and right ventricular infarction

H. Bueno, R. López-Palop, J. Osende, J. García-García, E. Pérez-David, J.A. Serrano, J.L. López-Sendón, J.L. Delcán. *Hospital General Gregorio Marañón, Madrid, Spain*

It is known that patients with acute inferior myocardial infarction (IMI) and right ventricular infarction (RVI) have a worse prognosis than those without it and that the elderly also have a poorer outcome. To assess the influence of age on prognosis of IMI and its relation with RVI, we studied the in-hospital clinical outcome of 652 consecutive patients admitted to our CCU with a definite diagnosis of IMI of less of 48 hours of evolution and compared their outcomes according to their age and to the presence of RVI.

Results: The mean age of the whole group was 73 ± 13 years, 80% males. Thrombolysis was used in 47% of patients and primary PTCA in 3%. The incidence of RVI was 35%. The total in-hospital mortality rate was 12% (20% in patients with RVI, 5% in those without, $p < 0.001$). A significant ($p < 0.001$) correlation between age and mortality was found in both groups. The addition of the interaction factor RVI-age to the logistic regression model was only significant in patients older than 65 year. We plotted age and mortality (Fig.) and found an exponential increase in mortality which was only significant in patients older than 65 years with RVI (logistic regression coefficient β: 0.152, $p < 0.0005$. In patients without RVI, β: 0.021, $p < 0.55$).



Conclusion: The in-hospital mortality of IMI is age-dependent, but this dependence is essentially related to the precence of RVI.

8:45

777-2 Non-Q wave myocardial infarction is not independently associated with worse outcome in the elderly

J.E. Murillo, J. Chen, D. Jagasia, Y. Wang, H.M. Krumholz. *Yale University School of Medicine, New Haven, CT, USA*

Several studies, predominately of younger patients, suggest that non-Q wave myocardial infarction (NQWMI) has a better in-hospital outcome than Q-wave myocardial infarction (QWMI), but the advantage is lost over time. To determine the association of NQWMI with outcome in the elderly, we used the Connecticut cohort of the Cooperative Cardiovascular Project pilot database which contains medical record information for Medicare patients admitted with acute myocardial infarction (MI). Both admission and discharge electrocardiograms were interpreted to classify patients by the presence of Q waves.

Among the 2,720 patients >65 years with interpretable electrocardiograms, 1,533 patients (56%) had an NQWMI. Patients with NQWMI had a significantly lower in-hospital mortality rate than QWMI (12% vs. 19%, $P < 0.001$). Among the 2,309 patients who survived the hospitalization, 1,350 (58%) had a NQWMI. These patients were significantly older and more likely to have a history of MI, CHF, diabetes, and revascularization surgery. The rate of cath during the initial hospitalization was 36% for the two groups. During the year after discharge, NQWMI patients had a mortality rate that was not significantly different from QWMI patients (20% vs. 17%, respectively, $P = 0.12$). After adjusting for demographic, clinical, pharmacological, and electrocardiographic variables, and treatment, NQWMI was not associated with any increased risk compared with QWMI (OR 0.89, 95% CI 0.68 to 1.15, P value 0.37). The rate of readmissions for any cause during the year postdischarge was also not different for both groups: 50.6% for QWMI and 50.3% for NQWMI.

Conclusion: Among elderly hospital survivors of AMI, NQWMI does not predict higher one-year mortality or one-year readmission when compared to QWMI.

9:00

777-3 Regional variation in myocardial infarction care: The cooperative cardiovascular project experience

T.A. Marciniak, H.M. Krumholz. *Health Care Financing Administration, Baltimore, MD, and Yale University School of Medicine, New Haven, CT, USA*

The Health Care Financing Administration's Cooperative Cardiovascular Project abstracted 224,377 medical records of hospital discharges of Medicare patients with acute myocardial infarction (AMI) from February, 1994, through July, 1995. These data show significant variations in care processes and outcomes across the nation when the data are analyzed by the nine Census Bureau regions. The most striking variations are lower use of invasive procedures in the New England region (angiography 22%, angioplasty 8%, CABG 6%) and greater use of beta blockers at discharge (55%) compared to the national means (angiography 36%, angioplasty 14%, CABG 9%, beta blockers 39%). The variations in rates for other process measures are smaller and more randomly distributed: reperfusion in ideal candidates (mean 66%, range 59 to 74%); aspirin during the stay (mean 79%, range 77 to 82%) and at discharge (mean 67%, range 65 to 71%); and ACE inhibitor use (mean 56%, range 52 to 64%) and calcium channel blocker avoidance (mean 84%, range 81 to 87%) at discharge in patients with reduced LVEF. The 30-day mortality rate is lowest in the New England region (15.3%), compared to the national mean of 17.8%, and the survival advantage in New England persists after risk adjustment (relative risk 0.8). *Conclusion:* Regional variations in AMI care persist despite the availability of good national guidelines for AMI treatment.

9:15

777-4 Decision making in octogenarians: Characteristics associated with selection for catheterization following acute myocardial infarction

P.J. Higgins, D.E. Wennberg, T.J. Ryan, Jr., C.T. Lambrew, W.J. French for the Participants in the National Registry of Myocardial Infarction. *Maine Medical Center, Portland, ME and Harbor-UCLA, Torrance, CA, USA*

Following acute MI, pts ≥80 yrs undergo cardiac catheterization (cath) less frequently than younger pts yet have a higher overall mortality. To understand post MI decision making and resource utilization in octogenarians we analyzed 21,354 pts ≥80 yrs from the NRMI-2 registry admitted with MI to hospitals with cath facilities in the US from 11/94–1/96. Univariate and multivariate logistic regression analyses were used to assess for independent associations with post MI cath.

Multivariate odds ratios for post MI cath

Positive	OR (95% CI)	Negative	OR (95% CI)
Prior PTCA	1.9 (1.7, 2.3)	Prior MI	0.9 (0.8, 0.99)
Prior CABG	1.3 (1.2, 1.5)	Prior CHF	0.6 (0.5, 0.7)
Male Gender	1.3 (1.2, 1.4)	Prior CVA	0.6 (0.5, 0.7)
Recurrent Angina	2.1 (1.9, 2.4)	Shock	0.8 (0.6, 0.9)
Recurrent MI	1.2 (1.01, 1.5)	Hypotension	0.8 (0.7, 0.9)
Thrombolytic Rx	1.3 (1.2, 1.5)	CHF	0.9 (0.8, 0.99)
SBP ≥ 90 mmHg	1.7 (1.3, 2.2)	New England	0.5 (0.4, 0.7)